

AÇOS – TABELA DE EQUIVALÊNCIA

AÇOS DE CONSTRUÇÃO				
W. Nr	DIN	AISI/SAE/ASTM	AFNOR	BS
DIN 17100				
1.0035	St – 33		A 33	Fe 310-0
1.0037	St 37-2		E 24-2	Fe 360 B
1.0116	St 37-3	A 284Gr.D/A 573Gr.58 A 570 Gr.36C/A 611Gr.C	E 24-3 / E 24-4	Fe 360 D1 FF
1.0044	St 44-2	A 570Gr.40	E 28-2	Fe 430 B FN
1.0144	St 44-3	A 573Gr.70/A 611Gr.D	E 28-3 / E 28-4	Fe 430 D1 FF
1.0570	St 52-3		E 36-3 / E 36-4	Fe 510 D1 FF
1.0050	St 50-2	A570Gr.50/A 572Gr.50	A 50-2	Fe 490-2 FN
1.0060	St 60-2	A 572Gr.65	A 60-2	Fe 590-2 FN
1.0070	St 70-2		A 70-2	Fe 690-2 FN
1.0330	St 2, St 12/U St 12	A 366	XTC	4CR/CS/HR/HS
1.0333	St 3, St 13/U St 13	A 619	XE	3CR/CS/HR/HS
1.0338	St 4, St 14/RR St 14	A 620	ZES	2CR/CS/HR/HS
AÇOS PARA VASOS DE PRESSÃO				
W. Nr	DIN	AISI/SAE/ASTM	AFNOR	BS
DIN 17155				
1.0345	H I	A 516Gr.65/55, A 414Gr.C A 515Gr.65/55, A 442Gr.55	A37CP & AP	1501/Gr.141-360 1501/Gr.161-360,151-366 1501/Gr.161-400,154-360 1501/Gr.164-360,161-360
1.0425	H II		A42CP & AP	1501/Gr.161-400,151-400 1501/GR.164-360, 161-400 1501/Gr.164-400, 154-400
1.0481	17 Mn 4	A 516Gr.70 / A 515Gr.70 A 414Gr.E, F	A48CP & AP	
1.0482	19 Mn 5	A 414Gr.F,G/ A 455I,II A 515Gr.70/ A 537Gr.I	A 52	1501/224/460-490
1.0473	19 Mn 6	A 537Cl.1/ A 414Gr.F,G A 612	A52CP & AP	
1.5415	15 Mo 3	A 204Gr.A 4017	15D3	1501/Gr.243
1.7332	17 Cr Mo 35	A 387Gr.2		
1.7335	13 CrMo 4 4	A 182-F11, F12 A 387Gr.12Cl.2	15CD 4.05	1501/2Gr.620,621
1.7380	10 Cr Mo 9 10	A 387Gr.22Cl.2	10CD 9.10	1501Gr.622/515-690
1.7363	12 Cr Mo 19 5	A 387Gr.5	Z 10 CD 5.05	

TUBOS DE AÇO RESISTENTES AO CALOR

W. Nr	DIN	AISI/SAE/ASTM	AFNOR	BS
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DIN 17175				
1.0305	St 35.8	A 106, A 179, A 192, A 53Gr.A	A 37; TU37C	HFS 23/CD523/HFS 33
1.0405	St 45.8	A 106Gr.B	A42;TU42C	HFS 27/CDS27
1.0116	St 37-3	A 284Gr.D/A 573Gr.58 A 570 Gr.36C/A 611Gr.C	E 24-3 / E 24-4	Fe 360 D1 FF

TUBOS DE AÇO

W. Nr	DIN	AISI/SAE/ASTM	AFNOR	BS
DIN 1629				
1.0308	St 35	A 53Gr.A	TU 37 b	3601/S 360
1.0309	St 35.4	A 106Gr.A		3602/HES-CFS 360
1.0408	St 45	A 53Gr.B	TU 48 b	3601/430-3602/410
1.0418	St 45.4	A 106Gr.B		3602/HFS-CFS500N
1.0580	St 52	A 252Gr.3	TU 52 b	1175 HFS23 4360 50D
1.0581	St 52.4	A 252Gr.3		
1.0507	Sr 55	A 252Gr.3	TU 56 b	
1.0509	St 55.4			3602/HFS-CDS 35

TUBOS DE AÇO PARA TRANSPORTE

W. Nr	DIN	AISI/SAE/ASTM	AFNOR	BS
DIN 17172				
1.0307	StE 210.7	API 5L/LS Gr.A	A 37	
1.0457	StE 240.7	API 5L/5LS Gr.B	A 42	
1.0484	StE 290.7	API 5LX/5LS X 42	X 42	
1.0429	StE 290.7 TM.	API 5LX/5LS X 42	X 42	
1.0409	StE 320.7	API 5LX/5LS X 46		
1.0430	StE 320.7 TM.	API 5LX/5LS X 46		
1.0582	StE 360.7	API 5LX/5LS X 52	X 52	
1.0578	StE 360.7 TM.	API 5LX/5LS X 52	X 52	
1.8970	StE 385.7	API 5LX/5LS X 56		
1.8971	StE 385.7 TM.	API 5LX/5LS X 56		
1.8972	StE 415.7	API 5LX/5LS X 60	X 63	
1.8973	StE 415.7 TM.	API 5LX/5LS X 60	X 63	
1.8975	StE 445.7 TM.	API 5LX/5LS X 65		
1.8977	StE 480.7 TM.	API 5LX/5LS X 70		

AÇOS TEMPERADOS E REVENIDOS

W. Nr	DIN	AISI/SAE/ASTM	AFNOR	BS
DIN 17200 – 17204 – 17222				
1.0402	C 22	(M) 1020/1023	AF42C20/1C22	1449/22HS,CS
1.0501	C 35	1035	1C35/AF55C35	1449/40CS,HS
1.0503	C 45	1045	1C45/AF65C45	1449/150HS,CS

1.0535	C 55	1055	1C55/AF70C55	070 M 55
1.0601	C 60	1060	1C60	1449/1 60HS /CS
1.1151	CK 22	1020/1023	2C22/XC 25	055 M 15
1.1181	CK 35	1035/1038	2C35/XC32/XC38H1	080 A 35
1.1191	CK 45	1045	2C45/XC42H1/XC48H1	080 M 46 060 A 47
1.1203	CK 55	1055	2C55/XC5H1	060 A 57 070 M 55
1.1221	CK 60	1060/1064	2C60/XC60	060 A 62

AÇOS FUNDIDOS

W. Nr	DIN	AISI/SAE/ASTM	AFNOR	BS
DIN 1681				
1.0416	GS-38			
1.0420	GS-38.3			
1.4443	GS-45	A27Gr.60-30		
1.0446	GS-45.3	A27Gr.65-35		
1.0551	GS-52	A27Gr.70-35		
1.0552	GS-52.3			
1.0553	GS-60			
1.0558	GS-60.3			
1.0555	GS-62			
1.0559	GS-62.3			
1.0554	GS-70			

AÇOS RESISTENTES AO ENVELHECIMENTO

W. Nr	DIN	AISI/SAE/ASTM	AFNOR	BS
DIN 17135				
1.0346	A St 35	A 442/A 516Gr.55	A 37 FP	
1.0426	A St 41	A 662Gr.A	A 42 FP	1501Gr.224-400/224-410
1.0436	A St 45	A 662Gr.C	A 48 FP	1501Gr.224-400/224-430 1503Gr.224-460
1.0577	A St 52	A 738	A 52 FP	4360 Fe510D2FF

AÇOS DE GRÃO FINO

W. Nr	DIN	AISI/SAE/ASTM	AFNOR	BS
DIN 17102				
1.0461	StE 255	A 442Gr.55	E24/3 & 4	
1.0486	StE 285	A 442Gr.60	E26/3 & 4	
1.0505	StE 315	A 252Gr.3/ A 516Gr.65 A 572Gr.45		1501-224Gr.28 & 30/A&B
1.0562	StE 355	A 225Gr.A,B / 1516Gr.70 A 537Cl.1	E30/3 & 4 A48P-FP/1 & 2	1501-224Gr.32/A & B

1.8900	StE 380	A 572Gr.55	E370/R & C	
1.8902	StE 420	A 572Gr.60/ A 633Gr.E	E420-I/II	4360Gr.55C
1.8905	StE 460	A 572Gr.65/ A 633Gr.E	E460-I/II	4360Gr.55F
1.8907	StE 500	A 514-G.A-P/ A 225Gr.C		
1.8909	StE 500V			
1.8926	StE 550V		E550 T-II	
1.8927	StE 620V		E620 T-I/II	
1.8928	StE 690V		E690 T	
1.6341	11 NiMo V 5 3			
1.6343	12 MnNiMo 5 5			
1.8807	13 MnNiMo 5 4			
1.6368	15 NiCuMoNb 5	A 302Gr.B,C,D A 508Cl.2,3/ A 533Type B,C,DCl.1,2		1501: 261-271-281-282
1.8817	17 MnMo V 6 4	A 302Gr.B,C,D A 508Cl.2,3/ 1533 Type P,C,DCl.1,2		1501: 261-271-281-282
1.6919	11 NiMnCrMo 5 5			
1.7279	17 MnCrMo 3 3			
1.6780	15 NiCrMo 10 6			
AÇOS ESTRUTURAL DE GRÃO FINO – CRIOGENIA				
W. Nr	DIN	AISI/SAE/ASTM	AFNOR	BS
DIN 17102				
1.0463	TStE 255		A 37 P 2	
1.0488	TStE 285	A 572Gr.42/ A 633Gr.A&B A662Gr.A	CF 24-CF 28	4360Gr.40&43 DD,E,EE
1.0508	TStE 315	A 573Gr.65/ A 618Gr.I A 633Gr.A,B/ A 662Gr.B	CF 28-CF 32	1633Gr.L/2762BGr.NDI-IV
1.0566	TStE 355	A 663Gr.C/ A 615Gr.I,II A 573Gr.70/ A 372Gr.50	A52P1,2/CF32-36	4360Gr.50E,EE
1.8910	TStE 380			
1.8912	TStE 420	A 678Gr.B		
1.8915	TStE 460	A 633Gr.E		4360Gr.55F

AÇOS PARA VASOS DE PRESSÃO DE HIDROGÊNIO

W. Nr	DIN	AISI/SAE/ASTM	AFNOR	BS
DIN				
1.7218	25 CrMo 4	4130/A 366F30	25CD4/25CrMo4	
1.7218	GS-25 CrMo 4			
1.7259	26 CrMo 7			
1.7273	24 CrMo 10	A 437gR.BN		
1.7281	16 CrMo 9 3	A 369Gr.FP21	20 CD 8	

AÇOS FUNDIDOS PARA ALTA TEMPERATURA

W. Nr	DIN	AISI/SAE/ASTM	AFNOR	BS
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DIN 17245				
1.0619	GS-C 25			
1.5419	GS-22 Mo 4	A 216Gr.WCA/4419		1503/243-430
1.7354	GS-22 CrMo 5 4			
1.7357	GS-17 CrMo 5 5	(A 217WC6)		
1.7363	GS-12CMo 19 5	A 217Gr.C5		1504/625 3100/B5
1.7380	GS-12 CrMo 9 10			

AÇOS DE GRÃO FINO PARA ALTA TEMPERATURA

W. Nr	DIN	AISI/SAE/ASTM	AFNOR	BS
DIN 17102				
1.0462	W StE 255	A 516Gr.55	A37 P 1	
1.0487	W StE 285	A 516Gr.60	A42P1-2/FP1-2	
1.0506	W StE 315			
1.0565	W StE 355			
1.8930	W StE 380			
1.8932	W StE 420	A 633Gr.E	CF 42	
1.8935	W StE 460	A 612		
1.8937	W StE 500	A517		

AÇOS DE GRÃO FINO ESPECIAL – CRIOGENIA

W. Nr	DIN	AISI/SAE/ASTM	AFNOR	BS
DIN 17102				
1.1103	E StE 255			
1.1104	E StE 285			
1.1105	E StE 315			
1.1106	E StE 355			
1.8911	E StE 380			
1.8913	E StE 420			
1.8918	E StE 460			
1.8919	E StE 500			

AÇOS PARA BAIXA TEMPERATURA

W. Nr	DIN	AISI/SAE/ASTM	AFNOR	BS
DIN 17173 – 17174 – 17280				
1.1101	TT St 35	A 333Gr.1/A 442Gr.55 A 516 Gr.55	TU 42 BT	3603 27LT30
1.5637	10 Ni 14	A 333Gr.3/A 334Gr.3	TU 16 N 14	3603 HFS/CFS503LT100
1.5680	12 Ni 19	A 645	5 Ni	
1.6212	11 MnNi 5 3			
1.6217	13 MnNi 6 3			
1.6228	14 NiMn 6			
1.5662	X 8 Ni 9	A 333Gr.8/A 334Gr.8 A 353/A 553 Type I, II	9 Ni	3603HFS/CFS509LT196
1.0437	TT St 41			
1.0456	TT St 45			
1.5639	16 Ni 14			

AÇOS RESISTENTES A CORROSÃO ATMOSFÉRICA

W. Nr	DIN	AISI/SAE/ASTM	AFNOR	BS
DIN 17119				
1.8960	WTSt 37-2		E 24E-2/3/4	(4360Gr.WR50A)
1.8961	WTSt 37-3			
1.8963	WTSt 52-3	A 242 Type2,A 441 A 588Gr.A-J	E36W-A2/3/4+B3/4	(4360Gr.WR50B)

AÇOS PARA CONSTRUÇÃO NAVAL

W. Nr	DIN	AISI/SAE/ASTM	AFNOR	BS
1.0440	A			
1.0441	A	A 131-A	BVCh.25-A	LRSch.P-A
1.0442	B			
1.0474	C		BVCh.25-C	
1.0475	D	A 131-D	BVCh.25-D	LRSch.P-D
1.0476	E	A 131-E	BVCh.25-E	LRSch.P-E
1.0513	A 32	A 131-AH32	BVCh.25-AH32	LRSch.P-AH32
1.0514	D 32	A 131-DH32	BVCh.25-DH32	LRSch.P-DH32
1.0515	E 32	A 131-EH32	BVCh.25-EH32	LRSch.P-EH32
1.0583	A 36	A 131-AH36	BVCh.25-AH36	LRSch.P-AH36
1.0584	D 36	A 131-DH36	BVCh.25-DH36	LRSch.P-DH36
1.0589	E 36	A 131-EH36	BVCh.25-EH36	LRSch.P-EH36